In the Specification:

Please replace the paragraph on page 1, lines 4-10 with the following paragraph:

-- This application is a continuation of copending application serial no. 09/228,875, now U.S. Patent No. 6,162,338, which is a continuation-in-part of application serial no. 08/730,678, now U.S. Patent No. 5,922,185, which is a continuation-in-part of application serial number 08/221,939, filed March 31, 1994, now U.S. Patent No. 5,578,180.--

Please replace the paragraph beginning on page 12, line 22 and ending on page 13, line 24 with the following paragraph:

-- In an embodiment of this gel and buffer system an electrophoresis gel is uniformly saturated with a gel buffer solution comprising a primary organic amine or substituted amine with a pKa near neutrality, titrated with approximately an equimolar amount of acid or zwitterionic compound, so that the pH of the buffer is between about pH 6 and pH 8, preferably between about pH 6.5 to pH 7.5, and most preferably 6.5 to 7.0. The electrophoresis gel may be any agarose or polyacrylamide gel. Preferably, the electrophoresis gel comprises between 3% and 25% (%T) acrylamide polymerized using from about 1% to about 6% cross linker (%C). More preferably, this

polyacrylamide gel is polymerized using from about 2% to about 5% crosslinker (%C). Preferably, the amine comprises Bis-Tris or N-(2-hydroxyethyl) morpholine, and most preferably, Bis-Tris. Suitable acids and zwitterionic compounds are hydrochloric acid, tricine, acetic acid, piperazine-N,N'-bis(2-ethanesulfonic acid), 3-(N-morpholino)-propanesulfonic acid, 2-(N-morpholino)-ethanesulfonic acid, N-(2-acetamido)-2-aminoethanesulfonic acid, 3-(N-morpholino)-2-hydroxypropanesulfonic acid, N-[tris(hydroxymethyl)methyl]-2-aminoethanesulfonic acid, N-(2-hydroxyethyl)-piperazine-N'-(2-ethanesulfonic acid), N,N-bis(2-hydroxyethyl)-2-aminoethanesulfonic acid, and 3-(N-tris-(hydroxymethyl) methylamino)-2-hydroxypropanesulfonic acid. Tricine, 2-(N-morpholino)-ethanesulfonic acid, and piperazine-N,N'-bis(2-ethanesulfonic acid) are preferred for use in the buffer for a continuous gel and buffer system for separation of DNA and RNA because the resulting system has separation characteristics similar to the commonly used TBE gel systems. Tricine is most preferred for that use. Preferably, the gel buffer comprises Bis-Tris titrated with tricine.--

A2 Cont'd.

Please replace the paragraph on page 16, lines 21-28 with the following paragraph:

A3

-- Tris, Bis-Tris, MES, tricine, MOPS and Piperazine-N,N'-bis(2-ethanesulfonic acid) (PIPES) were purchased from Sigma (St. Louis, MO) or Research Organics (Cleveland, Ohio). Thioglycolic acid (TGA), dithiothreitol (DTT) and beta-mercaptoethanol (BME) were from Sigma. All other chemicals were reagent, "ultra pure" or "electrophoresis grade" from standard sources.--

Please replace the paragraph on page 20, lines 6-19 with the following paragraph:

A4

-- Although MES and MOPS were selected as desirable running buffers for protein separation because the resulting system has separation characteristics similar to the commonly used Laemmli and Schaegger gel systems, it was found that a range of buffers are suitable for use in this system. Among the additional buffers giving good results were [N-(2-acetamido)]-2-aminoethanesulfonic acid (ACES), 3-[N-morpholino]-2-hydroxypropanesulfonic acid (MOPSO), N-[Tris-(hydroxymethyl) methyl]-2-aminoethanesulfonic acid (TES), N,N-bis(2-hydroxyethyl)-2-aminoethanesulfonic acid (BES), N-(2-hydroxyethyl)-piperazine-N'-(2-ethanesulfonic acid) (HEPES), and 3-(N-Tris-(hydroxymethyl) methylamino)-2-hydroxypropanesulfonic acid (TAPSO).--